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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/055,646	01/22/2002	Chia-Tin Chung	13732.5US01	9414
23552	7590	02/19/2004	EXAMINER	
MERCHANT & GOULD PC P.O. BOX 2903 MINNEAPOLIS, MN 55402-0903			CLEVELAND, MICHAEL B	
			ART UNIT	PAPER NUMBER
			1762	

DATE MAILED: 02/19/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/055,646

Applicant(s)

CHUNG, CHIA-TIN

Examiner

Michael Cleveland

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 8-15 is/are allowed.
- 6) ☒ Claim(s) 1 and 2 is/are rejected.
- 7) ☒ Claim(s) 3-7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 January 2002 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 042402.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamazaki et al. (U.S. Patent Application Publication 2001/0006827, hereafter '827).

'827 teaches a method of evaporating a thin film used in an organic electroluminescent (EL) display [0002], comprising:

providing a display substrate (101) [0013]

providing a mask (102) having a plurality of openings [0015] and placed below the display substrate [0013];

providing a plane evaporation source (104; Fig. 1A shows that source 104 has length and breadth and is thus planar.) placed below the mask [0013], wherein the plane evaporation source has a plurality of evaporating material cells (103) which are respectively aligned to the openings of the mask [0015]; and

evaporating the evaporating material cells to deposit a plurality of thin films on predetermined regions (pixels; [0038]) of the display substrate [0015].

Claim 2: The evaporated materials may be organic EL materials [0004]; [0038].

### *Allowable Subject Matter*

3. Claims 3-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. The following is a statement of reasons for the indication of allowable subject matter:

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Yamazaki et al. is discussed above. It does not state that the evaporation cells 103 are filled by providing a metal plate, providing an evaporation source below the metal plate, and evaporating the evaporation source to form the evaporating cells.

It is fairly common to form non-uniform coatings on substrates by vacuum deposition through a mask (see, for example, Swirbel (U.S. Patent 5,395,740)). It is also known to use vapor deposition to form a film that is then itself used as an evaporation source (See Tang et al. (U.S. Patent 5,904,961, col. 4, lines 1-40 and col. 8, line 3-8). However, the prior art does not fairly teach or suggest the formation of a plurality of cells (i.e., a non-uniform coating) on a substrate by evaporation in order to use the plurality of formed cells as an evaporation source to deposit the material on yet another substrate, particularly not via the process of aligning the cells with openings in a mask placed below a display substrate and evaporating the cells to form a plurality of thin films in predetermined regions on the display substrate.

5. Claims 8-15 are allowed.

6. The following is an examiner's statement of reasons for allowance:

Greer et al. (U.S. Patent 5,104,695) teaches substrates (14), masks (16) disposed below the substrate, a planar evaporation source (screen (24)) disposed below the masks, and a planar evaporation source (surface of pool (19)) disposed below the mesh screen (24), and teaches depositing evaporated material onto the screen and re-evaporating the material to form coatings on substrates (14) through masks (16). However, there is no disclosure of a plurality of evaporation cells either in the pool or on the mask, and there is no alignment of features of the evaporation sources (18 and 24) with features of mask (16). Thus, the art of record does not fairly teach or suggest the providing a display substrate, providing a mask below the substrate providing a first plane evaporation source that comprises a metal net and a plurality of evaporation cells that are aligned with openings in the mask and a second plane evaporation source that comprises a metal plate and a plurality of evaporation cells that are also aligned with openings in the mask and evaporating the first and second cells to deposit a plurality of thin films on the substrate.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue

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fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Littman (U.S. Patent 5,688,551) is cited regarding teaching of using sublimation to provide EL layers.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cleveland whose telephone number is (571) 272-1418. The examiner can normally be reached on Tuesday-Friday and alternate Mon, 8-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shrive Beck can be reached on (703) 272-1415. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael Cleveland  
Patent Examiner  
February 9, 2004